

REMARKS

Initially, Applicant would like to express appreciation to the Examiner for the detailed Final Official Action provided.

Applicants acknowledge with appreciation the Examiner's indication of allowable subject matter in claim 3.

Upon entry of the above amendment, claims 4 and 6 will have been amended, and newly presented claim 11 will have been added. Accordingly, claims 3, 4, 6, and 11 are currently pending. Applicants respectfully request reconsideration of the outstanding rejections and allowance of claims 3, 4, 6, and 11 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

The Examiner has rejected claim 6 under 35 U.S.C. § 102(e) as being anticipated by BURGESS et al. (U.S. Patent Application Publication No. 2003/0114853).

Although Applicants do not necessarily agree with the Examiner's rejection of the claim on this ground, nevertheless, Applicants have amended independent claim 6 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present application. In this regard, Applicants note that BURGESS et al. fails to show each and every element recited in the amended claim. In particular, claim 6, as amended, sets forth a rod connector including, inter alia, a connector main body swingably attached to a shank, a rod supporting portion in the connector main body, and "a pressure fixing device for pressure fixing the rod to the rod supporting portion of the connector main body, wherein a rear end of the shank comprises a flange portion that is configured to prevent removal of the shank from an engaging member, and wherein the flange portion is arranged coaxially

with the shank". As shown in the figures and described in the specification, Applicants' claimed rod connector 1 includes a shank portion 3 and flange portion 5 which is arranged coaxially with the shank portion 3. The flange portion 5 prevents removal of the rod connector 1 from the U-shaped engagement groove of the screw S in the axial direction of the screw S to be inserted in a vertebra body (*i.e.*, a bone). See particularly figures 3 and 4; and the specification, page 4, lines 1-4. Accordingly, in Applicants' claimed invention, the flange portion 5 prevents removal, in the axial direction, of the shank portion 3 from the engagement member S.

The BURGESS et al. patent publication discloses a connector including a main body swingably attached to a transverse member, which transverse member includes a proximal end and a distal end including a ball. As shown in the figures, the BURGESS et al. device includes projections on the proximal ends of the first and second transverse members 68, 70 and wrap around members 90 corresponding to Applicants' claimed flange portion. However, the projections of BURGESS et al. are not arranged coaxially with the first and second transverse members 68, 70. See particularly figure 5 of BURGESS et al. Further, the wrap around member 90 is also not arranged coaxially with the first or second transverse members 82, 84. It is noted that the Examiner has taken the position that the wrap around member 90 is capable of preventing removal of the transverse member from an engaging member. However, Applicants respectfully submit that the wrap around member 90 of the BURGESS et al. device is provided to prevent separation of the first transverse member 82 and the second transverse member 84. The wrap around member 90 does not prevent removal of the first and second transverse members 82, 84 from the C-clamp 86 in the axial direction of the transverse members. See particularly paragraph [0035] and figure 6 of BURGESS et al. Therefore, the

BURGESS et al. device does not include a shank with a coaxial flange at an end thereof and that prevents removal of a shank from an engaging member.

Further, the Examiner has asserted that the C-clamps 22 and 86 of the BURGESS et al. device correspond to Applicants' claimed engaging member. However, the C-clamps 22, 86 are not screwed into the bone, and, thus, are not engaging members. In fact, the C-clamps 22, 86 of BURGESS et al. do not have screw portions at all. See particularly figures 5 and 6. Therefore, the BURGESS et al. device does not include a shank with a coaxial flange at an end thereof that prevents removal of the shank from an engaging member.

Thus, the BURGESS et al. patent publication does not show a rod connector including, inter alia, a connector main body swingably attached to a shank, a rod supporting portion in the connector main body, and "a pressure fixing device for pressure fixing the rod to the rod supporting portion of the connector main body, wherein a rear end of the shank comprises a flange portion that is configured to prevent removal of the shank from an engaging member, and wherein the flange portion is arranged coaxially with the shank" as set forth in amended claim 6. Since the reference fails to show each and every element of the claimed device, the rejection of claim 6 under 35 U.S.C. § 102(e) over BURGESS et al. is improper and withdrawal thereof is respectfully requested.

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over BURGESS et al. in view of JACKSON et al. (U.S. Patent No. 5,716,355).

However, Applicants note that BURGESS et al. and JACKSON et al. fail to teach or suggest the subject matter claimed in claim 4, as amended. In particular, amended claim 4 sets forth a rod connector including, inter alia, a connector main body swingably attached to a shank, a rod

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supporting portion, and “a pressure fixing device for pressure fixing the rod to the rod supporting portion of the connector main body, wherein a supporting surface of the rod supporting portion comprises a sandblasted rough surface such that frictional resistance between the rod supporting portion and the rod is increased when the rod supporting portion supports the rod”.

Applicants’ claimed rod connector 1 includes a rod supporting portion 9 having a sandblasted rough supporting surface 13a such that the frictional resistance between the rod supporting portion 9 and the rod 7 is increased when the rod supporting portion 9 supports the rod 7. See particularly page 6, lines 13-16 of Applicants’ specification. The sandblasted rough surface provides an increased frictional resistance between the rod supporting portion and the rod when the rod supporting portion supports the rod. The rough supporting surface of the rod supporting portion of Applicants’ claimed invention contacts and digs into the rod, thus preventing rotation and axial movement of the rod, improving the rod connector’s grip on the rod and providing an increased frictional resistance between the rod supporting portion and the rod when the rod supporting portion supports the rod.

The Examiner has taken the position that the BURGESS et al. device includes a curved surface 32 corresponding to Applicants’ claimed supporting surface. However, as recognized by the Examiner, the BURGESS et al. publication fails to teach or suggest a rod supporting portion including a rough surface, as set forth in claim 4.

The JACKSON et al. patent is directed to a spinal rod transverse connection. As can be seen in figure 2, the JACKSON et al. device includes a pivot base 21 that includes a spinal rod receiving aperture through which a spinal rod 13 extends. The spinal rod receiving aperture includes teeth 26

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that assist in securing the pivot base 21 onto the spinal rod 13 when the set screw 23 is tightened onto the spinal rod 13. See particularly column 2, lines 49-56; and figure 2.

Contrary to the Examiner's assertions, there is nothing in the cited prior art that would lead one of ordinary skill in the art to make the modifications suggested by the Examiner in the rejection of claim 4 under 35 U.S.C. § 103(a) over BURGESS et al. in view of JACKSON et al. Thus, the only reason to combine the teachings of BURGESS et al. and JACKSON et al. results from a review of Applicants' disclosure and the application of impermissible hindsight.

Moreover, the JACKSON et al. patent fails to cure the deficiencies of the BURGESS et al. device. In this regard, it is noted that JACKSON et al. teaches that the spinal rod receiving aperture is provided with "axially extending serrations or teeth 26". Axially extending serrations or teeth are unlike a sandblasted rough surface, as described in Applicants' specification, including the drawings. Moreover, it is respectfully submitted that the surface comprising serrations or teeth cannot fairly be described as a rough surface, since projections are different in kind from roughness. Therefore, JACKSON et al. fails to teach or suggest a rod supporting portion "a sandblasted rough surface such that frictional resistance between the rod supporting portion and the rod is increased when the rod supporting portion supports the rod", as recited in claim 4, as amended.

Thus, the JACKSON et al. patent fails to cure the deficiencies of the BURGESS et al. device, and even assuming, arguendo, that the teachings of BURGESS et al. and JACKSON et al. have been properly combined, Applicants' claimed rod connector with a rod supporting portion "a pressure fixing device for pressure fixing the rod to the rod supporting portion of the connector main body, wherein a supporting surface of the rod supporting portion comprises a sandblasted rough surface

such that frictional resistance between the rod supporting portion and the rod is increased when the rod supporting portion supports the rod” would not have resulted from the combined teachings thereof.

Accordingly, the rejection of claim 4 under 35 U.S.C. § 103(a) over BURGESS et al. in view of JACKSON et al. is improper for all the above reasons and withdrawal thereof is respectfully requested.

Applicants submit that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicant’s invention as recited in newly submitted claim 11.

Accordingly, Applicants respectfully request reconsideration and withdrawal of all the rejections, and an early indication of the allowance of claims 3, 4, 6, and 11.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the proposed amendment is proper for entry since it merely clarifies the language describing the sandblasted rough surface in claim 4, clarifies the language describing the coaxial arrangement of the flange and the shank in claim 6, and clarifies the language describing the engaging member in newly presented claim 11, which are issues about which Applicants have already presented arguments and it is also submitted that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicant’ invention as recited in claims 3, 4, 6, and 11. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

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Accordingly, consideration of the present amendment, reconsideration of the outstanding Final Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

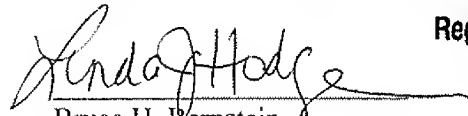
Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Any amendments to the claims which have been made in this amendment, which do not narrow the scope of the claims, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered cosmetic in nature, and to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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